

60,130-1899; 03MRA0388

IN THE CLAIMS

1. (Currently Amended) A disc brake comprising:
an actuation mechanism being movable to apply a braking force;
a pair of pistons movable upon receipt of said braking force to force a brake pad into contact with an item to be braked;
an adjustment mechanism for adjusting the location of said pair of pistons to take up clearance with wear in said brake pad; and
a force sensor for sensing a reaction force to said braking force, and identifying a point of force application increase indicative of initial contact of said brake pad with the item to be braked, said force sensor sending a signal to an electric control for said adjustment mechanism.
2. (Currently Amended) The disc brake as set forth in claim 1, wherein said actuation mechanism is an eccentric shaft, said eccentric shaft driving at least one bearing to in turn force said pair of pistons and said brake pad toward the item to be braked.
3. (Currently Amended) The disc brake as set forth in claim 2, wherein said force sensor is located to receive a reaction force from said eccentric shaft and said eccentric shaft applies ~~applying~~ said reaction force to said at least one bearing.
4. (Currently Amended) The disc brake as set forth in claim 3, wherein a bearing cup supports said at least one bearing and said eccentric shaft, said force sensor being placed on an

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opposed side of said bearing cup from a surface that supports said at least one bearing and said eccentric shaft.

5. (Previously Presented) The disc brake as set forth in claim 4, wherein said force sensor and said bearing cup are received in a cavity in a housing for said disc brake.

6. (Previously Presented) The disc brake as set forth in claim 4, wherein said force sensor has an outer cover, and a thin anvil member is placed between said outer cover and said force sensor, said thin anvil member transmitting said reaction force from said outer cover to said force sensor, and said thin anvil member being operable to limit a total force applied to said force sensor.

7. (Currently Amended) The disc brake as set forth in claim 1, wherein said force sensor is an electric sensor receiving a current and having a resistance that varies with the reaction force applied to said force sensor.

8. (Previously Presented) The disc brake as set forth in claim 7, wherein said force sensor includes a protective cover between a member which applies said reaction force and an electric portion of said force sensor which receives current.

9. (Currently Amended) The disc brake as set forth in claim 8, wherein a ~~relatively~~-thin anvil member is placed between said protective cover and said electric portion, said thin anvil

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member transmitting force from said protective cover to said electric portion, and said thin anvil member limiting ~~an the~~ amount of total force applied to said electric portion.

10. (Currently Amended) A disc brake comprising:

an actuation mechanism being movable to apply a braking force;

a pair of pistons movable upon receipt of said braking force to force a brake pad into contact with an item to be braked;

an adjustment mechanism for adjusting the location of said pair of pistons to take up clearance with wear in said brake pad; and

a force sensor for sensing a point of force application increase indicative of initial contact of said brake pad with the item to be braked, said force sensor sending a signal to an electric control for said adjustment mechanism, said force sensor being an electric sensor receiving a current and having a resistance that varies with ~~a the~~ force applied to said sensor.

11. (Previously Presented) The disc brake as set forth in claim 10, wherein said force sensor includes a protective cover between a member which applies said force to said force sensor and an electric portion of said force sensor which receives current.

12. (Currently Amended) The disc brake as set forth in claim 11, wherein a ~~relatively~~-thin anvil member is placed between said protective cover and said electric portion, said thin anvil member transmitting force from said protective cover to said electric portion, and said thin anvil member limiting ~~an the~~ amount of total force applied to said electric portion.

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13. (Currently Amended) The disc brake as set forth in claim 1210, wherein said actuation mechanism is an eccentric shaft, said eccentric shaft driving at least one bearing to in turn force said pair of pistons and said brake pad toward the item to be braked.

14. (Currently Amended) The disc brake as set forth in claim 13, wherein said force sensor is located to receive a reaction force from said eccentric shaft and said eccentric shaft applies ~~applying~~ said reaction force to said at least one bearing.

15. (Currently Amended) The disc brake as set forth in claim 14, wherein a bearing cup supports said at least one bearing and said eccentric shaft, said force sensor being placed on an opposed side of said bearing cup from a surface that supports said at least one bearing and said eccentric shaft.

16. (Previously Presented) The disc brake as set forth in claim 15, wherein said force sensor and said bearing cup are received in a cavity in a housing for said disc brake.

17. (Previously Presented) The disc brake as set forth in claim 16 wherein said thin anvil member is a compliant member whose deformation is limited by the cavity.

18. (Currently Amended) A disc brake comprising:
an actuation mechanism being movable to apply a braking force;

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a pair of pistons movable upon receipt of said braking force to force a brake pad into contact with an item to be braked, said actuation mechanism including an eccentric shaft, said eccentric shaft driving at least one bearing to in turn force said pair of pistons and said brake pad toward the item to be braked, a bearing cup supporting said at least one bearing and said eccentric shaft, said bearing cup received in a cavity in a housing for said disc brake;

an adjustment mechanism for adjusting the location of said pair of pistons to take up clearance with wear in said brake pad; and

a force sensor for sensing a point of force application increase indicative of initial contact of said brake pad with the item to be braked, said force sensor sending a signal to an electric control for said adjustment mechanism, ~~said force sensor being an electric sensor receiving a current and having a resistance that varies with the force applied to said force sensor,~~ said force sensor being positioned between said bearing cup and said cavity, said force sensor being an electric sensor receiving a current and having a resistance that varies with a ~~the~~ force applied to said force sensor.

19. (Previously Presented) The disc brake as set forth in claim 18, wherein said force sensor includes a protective cover between said bearing cup and an electric portion of said electric sensor which receives current.

20. (Currently Amended) The disc brake as set forth in claim 19, wherein a ~~relatively~~-thin anvil member is placed between said protective cover and said electric portion, said thin anvil

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member transmitting force from said protective cover to said electric portion, and said thin anvil member limiting an ~~the~~ amount of total force applied to said electric portion.

21. (New) The disc brake as set forth in claim 1, wherein said signal is utilized to identify the point of force application, and the point of force application is associated with a rotational position of a portion of the actuation mechanism, the rotational position being utilized after application of a braking force to identify a gap between components of the disc brake, to in turn identify a clearance that is adjusted by said adjustment mechanism after the application of the braking force.